GenCore version 4.5
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OM nucleic - nucleic search, using sw model

Run on: November 25, 2000, 04:36:10 ; Search time 88 Seconds
(without alignments)
2010.649 Million cell updates/sec

Title: US-09-373-230-1
Perfect score: 471
Sequence: 1 AACTTTGGCCGACTTCACTG.....TCACTAACTTACATCAAAGT 471

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 480022 seqs, 187831343 residues

Total number of hits satisfying chosen parameters: 960044

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : N_Geneseq_36:*
1: /SIDS6/gcgdata/geneseq/geneseqn/NA1980.DAT:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	470.6	99.9	471	17	T32403	Mouse interferon-g
2	470.6	99.9	471	17	T16224	Interferon gamma p
3	470.6	99.9	471	18	T60536	Mouse interferon-g
4	470.6	99.9	471	18	T80210	Murine protein for
5	470.6	99.9	471	19	V48227	Mouse interleukin
6	470.6	99.9	471	21	Z36923	DNA encoding a pro
7	470.6	99.9	570	19	V32755	Wild-type mouse in
8	469	99.6	471	19	V32633	Mutant mouse inter
9	467.4	99.2	471	19	V32632	Mutant mouse inter
10	400.6	85.1	722	19	V20875	Nucleotide sequenc
11	279.8	59.4	665	19	V20876	Nucleotide sequenc
12	268.4	57.0	582	21	Z55624	Equine interleukin
13	249.2	52.9	477	21	A10526	Human interleukin-
14	247.8	52.6	471	19	V48226	Human interleukin
15	247.8	52.6	471	19	V32625	Mutant human inter
16	247.8	52.6	471	19	V32626	Mutant human inter
17	247.8	52.6	570	19	V32754	Wild-type human in
18	247.8	52.6	1101	18	T74988	Interferon gamma i
19	247.8	52.6	1101	18	T74987	Interferon gamma i
20	247.8	52.6	1380	19	V05368	cDNA encoding huma
21	247.4	52.5	471	17	T32411	Human interferon-g
22	247.4	52.5	471	17	T32402	Human interferon-g
23	247.4	52.5	471	18	T80209	Human protein for
24	247.4	52.5	471	21	Z36875	DNA encoding a mat
25	247.4	52.5	579	19	V18906	Interferon-gamma i
26	247.4	52.5	579	19	V17200	Interferon-gamma i
27	247.4	52.5	1120	17	T32404	Human interferon-g
28	247.4	52.5	1120	19	V15825	cDNA for interfero
29	247.4	52.5	1120	21	Z36876	DNA encoding a pro
30	246.2	52.3	471	19	V32627	Mutant human inter
31	246.2	52.3	471	19	V32628	Mutant human inter
32	244.6	51.9	471	19	V48229	Human interleukin
33	244.6	51.9	471	19	V32629	Mutant human inter
34	244.6	51.9	471	19	V32630	Mutant human inter
35	244.4	51.9	540	20	X27732	Recombinant canine
36	244.4	51.9	540	21	A13801	Canine interleukin
37	244.4	51.9	582	20	X27724	Canine interleukin
38	244.4	51.9	582	21	A13793	Canine interleukin
39	244.4	51.9	582	21	Z55623	Canine interleukin
40	244.4	51.9	1427	20	X27726	Canine interleukin
41	244.4	51.9	1427	21	A13795	Canine interleukin
42	243	51.6	471	19	V48230	Human interleukin
43	243	51.6	471	19	V32631	Mutant human inter
44	127.8	27.1	11464	19	V48228	Interleukin 18 con
45	127.8	27.1	28994	19	V15826	Genomic DNA for in

ALIGNMENTS

RESULT 1
T32403
ID T32403 standard; cDNA to mRNA; 471 BP.
XX
AC T32403;
XX
DT 29-SEP-1996 (first entry)
XX
DE Mouse interferon-gamma inducer protein cDNA.
XX
KW Interferon-gamma inducer protein; IFN-gamma; antiviral; virucide;
KW antitumour; antibacterial; immunoregulatory; adoptive immunotherapy;
KW therapy; cancer; ds.
XX
OS Mus sp.
XX
PN EP712931-A2.
XX
PD 22-MAY-1996.
XX
PF 10-NOV-1995; 95EP-0308055.
XX
PR 29-SEP-1995; 95JP-0274988.
PR 15-NOV-1994; 94JP-0304203.
PR 23-FEB-1995; 95JP-0058240.
PR 10-MAR-1995; 95JP-0078357.
PR 18-SEP-1995; 95JP-0262062.
XX
PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI Fukuda S, Kohno K, Kunikata T, Kurimoto M, Okamura H;
PI Taniguchi M, Tanimoto T, Torigoe K, Ushio S;
XX
DR WPI; 1996-252837/26.
DR P-PSDB; R99559.

```
XX
PT   DNA encoding interferon-gamma prodn.-inducing polypeptide - useful
PT   to treat and prevent, e.g. viral disease, malignancies and immune
PT   disorders
XX
PS   Example A-3-2; Page 36-37; 48pp; English.
XX
CC   A cDNA clone (T32403) codes for a novel mouse protein (R99559) that
CC   induces interferon-gamma (IFN-gamma) prodn. by immunocompetent cells.
CC   The clone was obtd. from a mouse liver cDNA library by PCR
CC   amplification using primers (see also T32405-06) based on tryptic
CC   peptides (R99561-62) of the protein.  A DNA fragment based on
CC   the cDNA clone was used to screen a human liver cDNA library,
CC   leading to the isolation of a clone (T32402) coding for human mature
CC   IFN-gamma inducer protein (R99558), a useful therapeutic agent.
XX
SQ   Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;


  Query Match             99.9%;  Score 470.6;  DB 17;  Length 471;
  Best Local Similarity   100.0%;  Pred. No. 5.8e-124;
  Matches  471;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 AACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTC 60
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Db      1 aactttggccgacttcactgtacaaccgcagtaatacggaatataaatgaccaagttctc 60

Qy     61 TTCGTTGACAAAAGACAGCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCAGT 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 ttcgttgacaaaagacagcctgtgttcgaggatatgactgatattgatcaaagtgccagt 120

Qy    121 GAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGGCT 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 gaaccccagaccagactgataatatacatgtacaaagacagtgaagtaagaggactggct 180

Qy    181 GTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCATT 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 gtgaccctctctgtgaaggatagtaaaaygtctaccctctcctgtaagaacaagatcatt 240

Qy    241 TCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATATTC 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 tcctttgaggaaatggatccacctgaaaatattgatgatatacaaagtgatctcatattc 300

Qy    301 TTTCAGAAACGTGTTCCAGGACACAACAAGATGGAGTTTGAATCTTCACTGTATGAAGGA 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 tttcagaaacgtgttccaggacacaacaagatggagtttgaatcttcactgtatgaaggga 360

Qy    361 CACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAAAGGAT 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 cactttcttgcttgccaaaaggaagatgatgctttcaaactcattctgaaaaaaaaggat 420

Qy    421 GAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAAAGT 471
          |||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 gaaaatggggataaatctgtaatgttcactctcactaacttacatcaaagt 471


RESULT   2
T16224
ID   T16224 standard; cDNA to mRNA; 471 BP.
XX
AC   T16224;
XX
DT   02-SEP-1996  (first entry)
XX
DE   Interferon gamma production inducer protein coding sequence.
XX
KW   Interferon gamma; inducer; IFNgamma; immunocompetent cell; antiviral;
KW   antitumour; antiseptic; immunoregulatory; platelet-increasing agent;
KW   therapy; prevention; condyloma acuminatum; renal cancer; brain cancer;
KW   granuloma; mycosis fungoides; rheumatism; allergy; cytotoxicity; AIDS;
KW   killer T-cell; interleukin-2; IL-2; tumour necrosis factor; TNF;
KW   adoptive immunotherapy; monoclonal antibody; ds.
XX
OS   Mus musculus.
XX
PN   EP692536-A2.
XX
PD   17-JAN-1996.
XX
PF   13-JUL-1995;   95EP-0304906.
XX
PR   10-FEB-1995;   95JP-0045057.
PR   14-JUL-1994;   94JP-0184162.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Kohno K,  Kunikata T,  Kurimoto M,  Okamura H,  Taniguchi M;
PI   Tanimoto T, Torigoe K;
XX
DR   WPI; 1996-070177/08.
DR   P-PSDB; R92506.
XX
PT   Protein that induces gamma interferon prodn. in immuno:competent
PT   cells - used e.g. as antiviral or antitumour agent, also induces
PT   cytotoxicity of killer cells
XX
PS   Claim 4; Page 22-23; 30pp; English.
XX
CC   This sequence represents the coding sequence for the interferon gamma
CC   (IFNgamma) inducer protein of the invention.  The encoded protein induces
CC   IFNgamma production in immunocompetent cells.  The protein is useful as
CC   an antiviral, antitumour, antiseptic, immunoregulatory and
CC   platelet-increasing agent.  It can be used for treating or preventing
CC   AIDS, condyloma acuminatum, renal or brain cancer, granuloma, mycosis
CC   fungoides, rheumatism and allergy.  The protein can also be used to
CC   induce IFNgamma production in cultured cells.  The IFNgamma inducer
CC   strongly induces cytotoxicity of killer T-cells and when used with
CC   interleukin-2 (IL-2) and tumour necrosis factor (TNF), may improve the
CC   effect (or reduce side effects) of adoptive immunotherapy in tumours.
CC   This sequence can be used to produce the protein, which can then be
CC   purified (or assayed) using monoclonal antibodies.
XX
SQ   Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;


  Query Match             99.9%;  Score 470.6;  DB 17;  Length 471;
  Best Local Similarity   100.0%;  Pred. No. 5.8e-124;
  Matches  471;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 AACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTC 60
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Db      1 aactttggccgacttcactgtacaaccgcagtaatacggaatataaatgaccaagttctc 60

Qy     61 TTCGTTGACAAAAGACAGCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCAGT 120
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Db     61 ttcgttgacaaaagacagcctgtgttcgaggatatgactgatattgatcaaagtgccagt 120

Qy    121 GAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGGCT 180
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Db    121 gaaccccagaccagactgataatatacatgtacaaagacagtgaagtaagaggactggct 180

Qy    181 GTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCATT 240
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Db    181 gtgaccctctctgtgaaggatagtaaaaygtctaccctctcctgtaagaacaagatcatt 240

Qy    241 TCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATATTC 300
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Db    241 tcctttgaggaaatggatccacctgaaaatattgatgatatacaaagtgatctcatattc 300

Qy    301 TTTCAGAAACGTGTTCCAGGACACAACAAGATGGAGTTTGAATCTTCACTGTATGAAGGA 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 tttcagaaacgtgttccaggacacaacaagatggagtttgaatcttcactgtatgaaggga 360

Qy    361 CACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAAAGGAT 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 cactttcttgcttgccaaaaggaagatgatgctttcaaactcattctgaaaaaaaaggat 420
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Qy    421 GAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAAAGT 471
          ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 gaaaatggggataaatctgtaatgttcactctcactaacttacatcaaagt 471


RESULT   3
T60536
ID   T60536 standard; cDNA to mRNA; 471 BP.
XX
AC   T60536;
XX
DT   26-JAN-1998  (first entry)
XX
DE   Mouse interferon-gamma inducer cDNA.
XX
KW   Interferon-gamma, IFN-gamma; antiviral; antioncotic; radiotherapy;
KW   immunoregulatory; antitumour agent; chemotherapy; leukopaenia;
KW   thrombocytopaenia; immunocompetent cell; asthma; hayfever;
KW   rheumatism; interleukin; killer cell; ds.
XX
OS   Mus musculus.
XX
FH   Key             Location/Qualifiers
FT   mat_peptide     1..471
FT                   /*tag=  a
FT                   /product= interferon gamma inducer
XX
PN   EP767178-A1.
XX
PD   09-APR-1997.
XX
PF   26-SEP-1996;   96EP-0306997.
XX
PR   20-SEP-1996;   96JP-0269105.
PR   26-SEP-1995;   95JP-0270725.
PR   29-FEB-1996;   96JP-0067434.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Akita K,  Fujii M,  Kurimoto M,  Nukada Y,  Tanimoto T;
XX
DR   WPI; 1997-205381/19.
DR   P-PSDB; W15704.
XX
PT   Human protein that induces interferon-gamma prodn. in
PT   immuno:competent cells - useful for adoptive immuno:therapy of
PT   tumours and as antimicrobial agent etc.
XX
PS   Disclosure; Page 22; 26pp; English.
XX
CC   The present sequence encodes a novel protein from mouse liver cells,
CC   which induces interferon-gamma (IFN gamma) production in immunocompetent
CC   cells. This protein enhances cytotoxicity of killer cells and induces
CC   their formation. It is used as an antioncotic agent for antitumour
CC   immunotherapy, an antiviral (including anti-AIDS) or antibacterial agent,
CC   and in the treatment of atopic or immune system diseases, e.g. asthma,
CC   hayfever or rheumatism. When formulated with interleukin-3, it is also
CC   used to treat leukopaenia and thrombocytopaenia associated with
CC   radiotherapy or chemotherapy of leukaemia and other cancers. When used
CC   in antitumour immunotherapy, this novel protein significantly improves
CC   the immunotherapeutic effect of interleukin-2 (IL-2), compared with use
CC   of IL-2 alone, either when administered to the patient (before
CC   administration of IL-2) or by addition to the medium in which cells
CC   (intended for return to the patient) are being grown.
XX
SQ   Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;


  Query Match             99.9%;  Score 470.6;  DB 18;  Length 471;
  Best Local Similarity   100.0%;  Pred. No. 5.8e-124;
  Matches  471;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 AACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTC 60
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Db      1 aactttggccgacttcactgtacaaccgcagtaatacggaatataaatgaccaagttctc 60

Qy     61 TTCGTTGACAAAAGACAGCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCAGT 120
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Db     61 ttcgttgacaaaagacagcctgtgttcgaggatatgactgatattgatcaaagtgccagt 120

Qy    121 GAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGGCT 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 gaaccccagaccagactgataatatacatgtacaaagacagtgaagtaagaggactggct 180

Qy    181 GTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCATT 240
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Db    181 gtgaccctctctgtgaaggatagtaaaaygtctaccctctcctgtaagaacaagatcatt 240

Qy    241 TCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATATTC 300
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Db    241 tcctttgaggaaatggatccacctgaaaatattgatgatatacaaagtgatctcatattc 300

Qy    301 TTTCAGAAACGTGTTCCAGGACACAACAAGATGGAGTTTGAATCTTCACTGTATGAAGGA 360
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Db    301 tttcagaaacgtgttccaggacacaacaagatggagtttgaatcttcactgtatgaagga 360

Qy    361 CACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAAAGGAT 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 cactttcttgcttgccaaaaggaagatgatgctttcaaactcattctgaaaaaaaaggat 420

Qy    421 GAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAAAGT 471
          |||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 gaaaatggggataaatctgtaatgttcactctcactaacttacatcaaagt 471


RESULT   4
T80210
ID   T80210 standard; cDNA to mRNA; 471 BP.
XX
AC   T80210;
XX
DT   15-OCT-1997  (first entry)
XX
DE   Murine protein for induction of interferon-gamma.
XX
KW   Interferon-gamma; immunocompetent cell; malignant tumour;
KW   viral disease; bacterial infection; immune disease; ds.
XX
OS   Mus musculus.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..471
FT                   /*tag=  a
FT                   /transl_except= pos:208..210, aa:Xaa
FT                   /note= "No stop codon given"
XX
PN   JP09157180-A.
XX
PD   17-JUN-1997.
XX
PF   24-JAN-1996;   96JP-0028722.
XX
PR   04-OCT-1995;   95JP-0279906.
PR   10-MAR-1995;   95JP-0078357.
PR   29-SEP-1995;   95JP-0274988.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
DR   WPI; 1997-369391/34.
DR   P-PSDB; W24262.
XX
PT   A drug containing a polypeptide which induces interferon-gamma -
PT   useful for treating e.g. malignant tumours, viral, bacterial or
PT   immune diseases
XX
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PS   Disclosure; Page 10-11; 12pp; Japanese.
XX
CC   This sequence encodes a protein which induces interferon-gamma
CC   production in immunocompetent cells.  This protein may be used as
CC   the major component in a drug for the prevention and treatment of
CC   e.g. malignant tumours, viral diseases, bacterial infections and
CC   immune diseases.
XX
SQ   Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;


  Query Match             99.9%;  Score 470.6;  DB 18;  Length 471;
  Best Local Similarity   100.0%;  Pred. No. 5.8e-124;
  Matches  471;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 AACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTC 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 aactttggccgacttcactgtacaaccgcagtaatacggaatataaatgaccaagttctc 60

Qy      61 TTCGTTGACAAAAGACAGCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCAGT 120
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Qy     241 TCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATATTC 300
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Db     241 tcctttgaggaaatggatccacctgaaaatattgatgatatacaaagtgatctcatattc 300

Qy     301 TTTCAGAAACGTGTTCCAGGACACAACAAGATGGAGTTTGAATCTTCACTGTATGAAGGA 360
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Db     301 tttcagaaacgtgttccaggacacaacaagatggagtttgaatcttcactgtatgaagga 360

Qy     361 CACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAAAGGAT 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 cactttcttgcttgccaaaaggaagatgatgctttcaaactcattctgaaaaaaaaggat 420

Qy     421 GAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAAAGT 471
           |||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 gaaaatggggataaatctgtaatgttcactctcactaacttacatcaaagt 471


RESULT   5
V48227
ID   V48227 standard; cDNA to mRNA; 471 BP.
XX
AC   V48227;
XX
DT   16-NOV-1998  (first entry)
XX
DE   Mouse interleukin 18 gene.
XX
KW   Mouse; interleukin-18; IL-18; osteoclast; hypercalcaemia; osteopenia; ds;
KW   osteoclastoma Behcet's syndrome; osteosarcoma; arthropathy; osteoporosis;
KW   chronic rheumatoid arthritis; deformity ostitis; primary hyperthyroidism.
XX
OS   Mus sp.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..471
FT                   /*tag=  a
FT                   /product= "Interleukin 18"
FT                   /note= "No stop or start codon given"
XX
PN   EP861663-A2.
XX
PD   02-SEP-1998.
XX
PF   24-FEB-1998;   98EP-0301352.
XX
PR   25-FEB-1997;   97JP-0055468.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Gillespie MT,  Horwood NJ,  Kurimoto M,  Udagawa N;
XX
DR   WPI; 1998-448964/39.
DR   P-PSDB; W77078.
XX
PT   Use of interleukin-18 to inhibit osteoclast formation - in treatment
PT   of e.g. hypercalcaemia, osteoclastoma, Behcet's syndrome,
PT   osteosarcoma, chronic rheumatoid arthritis, deformity ostitis,
PT   primary hyperthyroidism and osteoporosis
XX
PS   Disclosure; Page 29; 56pp; English.
XX
CC   Interleukin-18 (IL-18) or a functional equivalent can be used for
CC   inhibition of osteoclast formation.  IL-18 is used for treating or
CC   preventing osteoclast-related diseases e.g. hypercalcaemia, osteoclastoma
CC   Behcet's syndrome, osteosarcoma, arthropathy, chronic rheumatoid
CC   arthritis, deformity ostitis, primary hyperthyroidism, osteopenia and
CC   osteoporosis.
XX
SQ   Sequence 471 BP; 162 A; 91 C; 92 G; 126 T; 0 other;


  Query Match             99.9%;  Score 470.6;  DB 19;  Length 471;
  Best Local Similarity   99.8%;  Pred. No. 5.8e-124;
  Matches  470;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 AACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTC 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 aactttggccgacttcactgtacaaccgcagtaatacggaatataaatgaccaagttctc 60

Qy      61 TTCGTTGACAAAAGACAGCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCAGT 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 ttcgttgacaaaagacagcctgtgttcgaggatatgactgatattgatcaaagtgccagt 120

Qy     121 GAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGGCT 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 gaaccccagaccagactgataatatacatgtacaaagacagtgaagtaagaggactggct 180

Qy     181 GTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCATT 240
           |||||||||||||||||||||||||:||||||||||||||||||||||||||||||||||
Db     181 gtgaccctctctgtgaaggatagtaaaatgtctaccctctcctgtaagaacaagatcatt 240

Qy     241 TCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATATTC 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 tcctttgaggaaatggatccacctgaaaatattgatgatatacaaagtgatctcatattc 300

Qy     301 TTTCAGAAACGTGTTCCAGGACACAACAAGATGGAGTTTGAATCTTCACTGTATGAAGGA 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 tttcagaaacgtgttccaggacacaacaagatggagtttgaatcttcactgtatgaagga 360

Qy     361 CACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAAAGGAT 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 cactttcttgcttgccaaaaggaagatgatgctttcaaactcattctgaaaaaaaaggat 420

Qy     421 GAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAAAGT 471
           |||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 gaaaatggggataaatctgtaatgttcactctcactaacttacatcaaagt 471


RESULT   6
Z36923
ID   Z36923 standard; cDNA to mRNA; 471 BP.
XX
AC   Z36923;
XX
DT   13-MAR-2000  (first entry)
```

```
XX
DE   DNA encoding a protein that induces IFN-gamma production.
XX
KW   Mouse; interferon gamma production; IFN-gamma; immunocompetent cell;
KW   antiviral; immunoregulatory; antigen; mitogen;
KW   IFN-gamma susceptible disease; antibacterial; antitumour;
KW   blood platelet enhancing agent; hepatitis; herpes syndrome; condyloma;
KW   AIDS; bacterial disease; Candidiasis; malaria; solid malignant tumour;
KW   renal cancer; mycosis fungoides; chronic granulomatous disease;
KW   blood cell malignant tumour; adult T cell leukaemia;
KW   chronic myelogenous leukaemia; malignant leukaemia; immune disease;
KW   allergy; rheumatism; ds.
XX
OS   Mus sp.
XX
FH   Key             Location/Qualifiers
FT   mat_peptide     1..471
FT                   /*tag=  a
FT                   /transl_except= (pos: 208..210, aa: Xaa)
FT                   /note= "Xaa is not specified"
XX
PN   EP962531-A2.
XX
PD   08-DEC-1999.
XX
PF   10-NOV-1995;   99EP-0104104.
XX
PR   15-NOV-1994;   94JP-0304203.
PR   23-FEB-1995;   95JP-0058240.
PR   10-MAR-1995;   95JP-0078357.
PR   18-SEP-1995;   95JP-0262062.
PR   29-SEP-1995;   95JP-0274988.
PR   10-NOV-1995;   95EP-0308055.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Ushio S,  Torigoe K,  Tanimoto T,  Okamura H;
XX
DR   WPI; 2000-064289/06.
DR   P-PSDB; Y53905.
XX
PT   Novel polypeptides used in the treatment of interferon-gamma
PT   susceptible diseases -
XX
PS   Disclosure; Page 3; 42pp; English.
XX
CC   The present sequence encodes a murine protein that induces interferon
CC   (IFN)-gamma production by immunocompetent cells. IFN-gamma is a
CC   protein which has antiviral, antioncotic and immunoregulatory activities,
CC   and is produced by immunocompetent cells stimulated with antigens or
CC   mitogens. A probe derived from the present sequence was used to isolate
CC   the corresponding human protein from human liver cells. The protein of
CC   the invention is used to treat IFN-gamma susceptible diseases, and also
CC   have use as a antiviral agent, antibacterial agent, antitumour agent,
CC   immunoregulatory agent and blood platelet enhancing agent. Diseases
CC   which can be treated with the protein include viral diseases such as
CC   hepatitis, herpes syndrome, condyloma, and AIDS; bacterial diseases
CC   such as Candidiasis and malaria; solid malignant tumours such as renal
CC   cancer, mycosis fungoides, and chronic granulomatous disease; blood
CC   cell malignant tumours such as adult T cell leukaemia, chronic
CC   myelogenous leukaemia, and malignant leukaemia; and immune diseases
CC   such as allergy and rheumatism.
XX
SQ   Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;


  Query Match             99.9%;  Score 470.6;  DB 21;  Length 471;
  Best Local Similarity   100.0%;  Pred. No. 5.8e-124;
  Matches  471;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 AACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTC 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 aactttggccgacttcactgtacaaccgcagtaatacggaatataaatgaccaagttctc 60

Qy      61 TTCGTTGACAAAAGACAGCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCAGT 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 ttcgttgacaaaagacagcctgtgttcgaggatatgactgatattgatcaaagtgccagt 120

Qy     121 GAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGGCT 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 gaaccccagaccagactgataatatacatgtacaaagacagtgaagtaagaggactggct 180

Qy     181 GTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCATT 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 gtgaccctctctgtgaaggatagtaaaaygtctaccctctcctgtaagaacaagatcatt 240

Qy     241 TCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATATTC 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 tcctttgaggaaatggatccacctgaaaatattgatgatatacaaagtgatctcatattc 300

Qy     301 TTTCAGAAACGTGTTCCAGGACACAACAAGATGGAGTTTGAATCTTCACTGTATGAAGGA 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 tttcagaaacgtgttccaggacacaacaagatggagtttgaatcttcactgtatgaagga 360

Qy     361 CACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAAAGGAT 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 cactttcttgcttgccaaaaggaagatgatgctttcaaactcattctgaaaaaaaaggat 420

Qy     421 GAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAAAGT 471
           |||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 gaaaatggggataaatctgtaatgttcactctcactaacttacatcaaagt 471


RESULT   7
V32755
ID   V32755 standard; cDNA; 570 BP.
XX
AC   V32755;
XX
DT   25-SEP-1998  (first entry)
XX
DE   Wild-type mouse interferon-gamma inducing factor cDNA.
XX
KW   Interferon-gamma inducing factor; interferon-gamma; killer cell;
KW   antitumour agent; antiviral agent; antimicrobial agent; tumour; mIGIF;
KW   hepatitis; malaria; tuberculosis; renal carcinoma; rheumatism; AIDS;
KW   osteoporosis; thrombopenia; acquired immunodeficiency syndrome; ds.
XX
OS   Mus sp.
XX
FH   Key             Location/Qualifiers
FT   5'UTR           1..15
FT                   /*tag=  a
FT   CDS             16..558
FT                   /*tag=  b
FT                   /product= "Immature mouse IGIF"
FT   sig_peptide     16..84
FT                   /*tag=  c
FT                   /note= "This sequence claimed by the inventors
FT                        under claim 11 in the specification"
FT   mat_peptide     85..555
FT                   /*tag=  d
FT   3'UTR           559..570
FT                   /*tag=  e
XX
PN   EP845530-A2.
XX
PD   03-JUN-1998.
XX
PF   28-NOV-1997;   97EP-0309632.
XX
PR   14-NOV-1997;   97JP-0329715.
PR   29-NOV-1996;   96JP-0333037.
PR   21-JAN-1997;   97JP-0020906.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
```

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XX
PI   Kurimoto M,  Okamoto I,  Yamamoto K;
XX
DR   WPI; 1998-288747/26.
DR   P-PSDB; W48960.
XX
PT   Mutants of interferon-gamma inducing polypeptide - useful as
PT   antitumour, antiviral, antimicrobial or anti-immunopathic agents
XX
PS   Claim 11; pages 38-39; 59pp; English.
XX
CC   The present sequence represents the wild-type mouse interferon-gamma
CC   inducing factor (mIGIF) cDNA.  The invention provides for mutant mouse
CC   and human interferon-gamma inducing factors in which one or more
CC   cysteine residues are replaced with different residues at or away from
CC   the consensus sequences shown in W48956-W48958.  The mutant mIGIFs are
CC   capable of stimulating immunocompetent cells for the production of
CC   interferon-gamma and are claimed to be less toxic, more active and
CC   stable than the corresponding wild type interferon-gamma inducing
CC   factor.  The mutant mIGIFs are also claimed to enhance killer cell
CC   cytotoxicity and/or induce killer cell formation, and may therefore
CC   be useful as antitumour agents, antitumour immunotherapeutics, antiviral
CC   agents and antimicrobial agents.  The mutant mIGIFs are also claimed
CC   to be useful for treating hepatitis, acquired immunodeficiency syndrome
CC   (AIDS), malaria, tuberculosis, solid malignant tumours (e.g. renal
CC   carcinoma), rheumatism, osteoporosis and thrombopenia caused by
CC   radiation-  and chemo-therapy.
XX
SQ   Sequence 570 BP; 175 A; 123 C; 121 G; 151 T; 0 other;


  Query Match             99.9%;  Score 470.6;  DB 19;  Length 570;
  Best Local Similarity   99.8%;  Pred. No. 6.2e-124;
  Matches  470;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 AACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTC 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     85 aactttggccgacttcactgtacaaccgcagtaatacggaatataaatgaccaagttctc 144

Qy     61 TTCGTTGACAAAAGACAGCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCAGT 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    145 ttcgttgacaaaagacagcctgtgttcgaggatatgactgatattgatcaaagtgccagt 204

Qy    121 GAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGGCT 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    205 gaaccccagaccagactgataatatacatgtacaaagacagtgaagtaagaggactggct 264

Qy    181 GTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCATT 240
          ||||||||||||||||||||||||||||:||||||||||||||||||||||||||||||
Db    265 gtgaccctctctgtgaaggatagtaaaatgtctaccctctcctgtaagaacaagatcatt 324

Qy    241 TCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATATTC 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    325 tcctttgaggaaatggatccacctgaaaatattgatgatatacaaagtgatctcatattc 384

Qy    301 TTTCAGAAACGTGTTCCAGGACACAACAAGATGGAGTTTGAATCTTCACTGTATGAAGGA 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    385 tttcagaaacgtgttccaggacacaacaagatggagtttgaatcttcactgtatgaagga 444

Qy    361 CACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAAAGGAT 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    445 cactttcttgcttgccaaaaggaagatgatgctttcaaactcattctgaaaaaaaaggat 504

Qy    421 GAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAAAGT 471
          ||||||||||||||||||||||||||||||||||||||||||||||||||
Db    505 gaaaatggggataaatctgtaatgttcactctcactaacttacatcaaagt 555


RESULT   8
V32633
ID   V32633 standard; cDNA; 471 BP.
XX
AC   V32633;
     -  -
XX
DT   25-SEP-1998  (first entry)
XX
DE   Mutant mouse interferon-gamma inducing factor cDNA mIGIF/MUT12.
XX
KW   Interferon-gamma inducing factor; interferon-gamma; killer cell;
KW   antitumour agent; antiviral agent; antimicrobial agent; tumour; mIGIF;
KW   hepatitis; malaria; tuberculosis; renal carcinoma; rheumatism; AIDS;
KW   osteoporosis; thrombopenia; acquired immunodeficiency syndrome; ds.
XX
OS   Mus sp.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..471
FT                   /*tag=  a
FT                   /product= "Mutant human interferon-gamma inducing
FT                            factor mIGIF/MUT12"
FT                   /note= "CDS does not contain a stop codon"
FT   mutation        373..375
FT                   /*tag=  b
FT                   /note= "changed from TGC in wild-type to AGC in
FT                          mutant"
XX
PN   EP845530-A2.
XX
PD   03-JUN-1998.
XX
PF   28-NOV-1997;   97EP-0309632.
XX
PR   14-NOV-1997;   97JP-0329715.
PR   29-NOV-1996;   96JP-0333037.
PR   21-JAN-1997;   97JP-0020906.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Kurimoto M,  Okamoto I,  Yamamoto K;
XX
DR   WPI; 1998-288747/26.
DR   P-PSDB; W48969.
XX
PT   Mutants of interferon-gamma inducing polypeptide - useful as
PT   antitumour, antiviral, antimicrobial or anti-immunopathic agents
XX
PS   Claim 10; page 50; 59pp; English.
XX
CC   The present sequence represents the mutant mouse interferon-gamma
CC   inducing factor cDNA mIGIF/MUT12.  The wild-type mouse interferon-gamma
CC   factor (mIGIF) cDNA sequence is shown in V32755.  The invention provides
CC   for mutant human and mouse interferon-gamma inducing factors in which one
CC   or more cysteine residues are replaced with different residues at or away
CC   from the consensus sequences shown in W48956-W48958.  The mutant mIGIFs
CC   are capable of stimulating immunocompetent cells for the production of
CC   interferon-gamma and are claimed to be less toxic, more active and
CC   stable than the corresponding wild type mIGIF factor.  The mutant mIGIFs
CC   are also claimed to enhance killer cell cytotoxicity and/or induce killer
CC   cell formation, and may therefore be useful as antitumour agents,
CC   antitumour immunotherapeutics, antiviral agents and antimicrobial agents.
CC   The mutant mIGIFs are also claimed to be useful for treating hepatitis,
CC   acquired immunodeficiency syndrome (AIDS), malaria, tuberculosis, solid
CC   malignant tumours (e.g. renal carcinoma), rheumatism, osteoporosis and
CC   thrombopenia caused by radiation-  and chemo-therapy.
XX
SQ   Sequence 471 BP; 163 A; 91 C; 92 G; 125 T; 0 other;


  Query Match             99.6%;  Score 469;  DB 19;  Length 471;
  Best Local Similarity   99.6%;  Pred. No. 1.6e-123;
  Matches  469;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 AACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTC 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 aactttggccgacttcactgtacaaccgcagtaatacggaatataaatgaccaagttctc 60
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Qy      61 TTCGTTGACAAAAGACAGCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCAGT 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 ttcgttgacaaaagacagcctgtgttcgaggatatgactgatattgatcaaagtgccagt 120

Qy     121 GAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGGCT 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 gaaccccagaccagactgataatatacatgtacaaagacagtgaagtaagaggactggct 180

Qy     181 GTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCATT 240
           ||||||||||||||||||||||||||||:||||||||||||||||||||||||||||||
Db     181 gtgaccctctctgtgaaggatagtaaaatgtctaccctctcctgtaagaacaagatcatt 240

Qy     241 TCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATATTC 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 tcctttgaggaaatggatccacctgaaaatattgatgatatacaaagtgatctcatattc 300

Qy     301 TTTCAGAAACGTGTTCCAGGACACAACAAGATGGAGTTTGAATCTTCACTGTATGAAGGA 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 tttcagaaacgtgttccaggacacaacaagatggagtttgaatcttcactgtatgaagga 360

Qy     361 CACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAAAGGAT 420
           ||||||||||| |||||||||||||||||||||||||||||||||||||||||||||||
Db     361 cactttcttgctagccaaaaggaagatgatgctttcaaactcattctgaaaaaaaaggat 420

Qy     421 GAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAAAGT 471
           |||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 gaaaatggggataaatctgtaatgttcactctcactaacttacatcaaagt 471


RESULT   9
V32632
ID   V32632 standard; cDNA; 471 BP.
XX
AC   V32632;
XX
DT   25-SEP-1998  (first entry)
XX
DE   Mutant mouse interferon-gamma inducing factor cDNA mIGIF/MUT11.
XX
KW   Interferon-gamma inducing factor; interferon-gamma; killer cell;
KW   antitumour agent; antiviral agent; antimicrobial agent; tumour; mIGIF;
KW   hepatitis; malaria; tuberculosis; renal carcinoma; rheumatism; AIDS;
KW   osteoporosis; thrombopenia; acquired immunodeficiency syndrome; ds.
XX
OS   Mus sp.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..471
FT                   /*tag=  a
FT                   /product= "Mutant human interferon-gamma inducing
FT                            factor mIGIF/MUT11"
FT                   /note= "CDS does not contain a stop codon"
FT   mutation        19..21
FT                   /*tag=  b
FT                   /note= "changed from TGT in wild-type to GCT in
FT                          mutant"
FT
XX
PN   EP845530-A2.
XX
PD   03-JUN-1998.
XX
PF   28-NOV-1997;   97EP-0309632.
XX
PR   14-NOV-1997;   97JP-0329715.
PR   29-NOV-1996;   96JP-0333037.
PR   21-JAN-1997;   97JP-0020906.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Kurimoto M,  Okamoto I,  Yamamoto K;
XX
DR   WPI; 1998-288747/26.
DR   P-PSDB; W48968.
XX
PT   Mutants of interferon-gamma inducing polypeptide - useful as
PT   antitumour, antiviral, antimicrobial or anti-immunopathic agents
XX
PS   Claim 10; pages 49-50; 59pp; English.
XX
CC   The present sequence represents the mutant mouse interferon-gamma
CC   inducing factor cDNA mIGIF/MUT11.  The wild-type mouse interferon-gamma
CC   factor (mIGIF) cDNA sequence is shown in V32755.  The invention provides
CC   for mutant human and mouse interferon-gamma inducing factors in which one
CC   or more cysteine residues are replaced with different residues at or away
CC   from the consensus sequences shown in W48956-W48958.  The mutant mIGIFs
CC   are capable of stimulating immunocompetent cells for the production of
CC   interferon-gamma and are claimed to be less toxic, more active and
CC   stable than the corresponding wild type mIGIF factor.  The mutant mIGIFs
CC   are also claimed to enhance killer cell cytotoxicity and/or induce killer
CC   cell formation, and may therefore be useful as antitumour agents,
CC   antitumour immunotherapeutics, antiviral agents and antimicrobial agents.
CC   The mutant mIGIFs are also claimed to be useful for treating hepatitis,
CC   acquired immunodeficiency syndrome (AIDS), malaria, tuberculosis, solid
CC   malignant tumours (e.g. renal carcinoma), rheumatism, osteoporosis and
CC   thrombopenia caused by radiation-  and chemo-therapy.
XX
SQ   Sequence 471 BP; 162 A; 92 C; 92 G; 125 T; 0 other;


  Query Match             99.2%;  Score 467.4;  DB 19;  Length 471;
  Best Local Similarity   99.4%;  Pred. No. 4.6e-123;
  Matches  468;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1 AACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTC 60
           |||||||||||||||||  ||||||||||||||||||||||||||||||||||||||||
Db       1 aactttggccgacttcacgctacaaccgcagtaatacggaatataaatgaccaagttctc 60

Qy      61 TTCGTTGACAAAAGACAGCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCAGT 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 ttcgttgacaaaagacagcctgtgttcgaggatatgactgatattgatcaaagtgccagt 120

Qy     121 GAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGGCT 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 gaaccccagaccagactgataatatacatgtacaaagacagtgaagtaagaggactggct 180

Qy     181 GTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCATT 240
           ||||||||||||||||||||||||||||:||||||||||||||||||||||||||||||
Db     181 gtgaccctctctgtgaaggatagtaaaatgtctaccctctcctgtaagaacaagatcatt 240

Qy     241 TCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATATTC 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 tcctttgaggaaatggatccacctgaaaatattgatgatatacaaagtgatctcatattc 300

Qy     301 TTTCAGAAACGTGTTCCAGGACACAACAAGATGGAGTTTGAATCTTCACTGTATGAAGGA 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 tttcagaaacgtgttccaggacacaacaagatggagtttgaatcttcactgtatgaagga 360

Qy     361 CACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAAAGGAT 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 cactttcttgcttgccaaaaggaagatgatgctttcaaactcattctgaaaaaaaaggat 420

Qy     421 GAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAAAGT 471
           |||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 gaaaatggggataaatctgtaatgttcactctcactaacttacatcaaagt 471


RESULT  10
V20875
ID   V20875 standard; cDNA; 722 BP.
XX
AC   V20875;
XX
DT   28-JUL-1998  (first entry)
XX
```

```
DE   Nucleotide sequence encoding a rat interferon-gamma inducing factor.
XX
KW   Rat interferon-gamma inducing factor; IGIF; interleukin-18; IL-18;
KW   IL-18-alpha; transformation; antibody; probe; hybridisation; ss.
XX
OS   Rattus sp.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..585
FT                   /*tag=  a
FT                   /product= "interferon-gamma inducing factor"
FT   sig_peptide     1..108
FT                   /*tag=  b
XX
PN   WO9810072-A1.
XX
PD   12-MAR-1998.
XX
PF   08-SEP-1997;   97WO-US15891.
XX
PR   08-APR-1997;   97US-0043087.
PR   09-SEP-1996;   96US-0025141.
XX
PA   (CORR ) CORNELL RES FOUND INC.
XX
PI   Conti B,  Joh TH;
XX
DR   WPI; 1998-193622/17.
DR   P-PSDB; W53282.
XX
PT   Rat interferon-gamma inducing factors and related DNA - useful for
PT   quantitating stress in a mammal
XX
PS   Claim 4; Page 31; 47pp; English.
XX
CC   This is the nucleotide sequence of the rat interferon-gamma inducing
CC   factor (IGIF), also known as interleukin-18 (IL-18).  It can be used
CC   to transform a cell, which upon its expression can cause the cell to
CC   produce rat IGIF, i.e. IL-18 or IL-18 alpha.  The antibody to IGIF,
CC   IGIF and probes derived from it, are useful for detection of IL-18 or
CC   IL-18 alpha present in a sample. The amount of IL-18 or IL-18 alpha
CC   in a sample can be used to quantitate stress in a mammal.
XX
SQ   Sequence 722 BP; 252 A; 138 C; 140 G; 192 T; 0 other;


  Query Match             85.1%;  Score 400.6;  DB 19;  Length 722;
  Best Local Similarity   91.8%;  Pred. No. 4.1e-104;
  Matches  434;  Conservative    1;  Mismatches   35;  Indels    3;  Gaps    1;

Qy       2 ACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTCT 61
           |||||||| |||||||||||||||||||||||||||  ||||||||||||||||||||
Db     110 actttggcagacttcactgtacaaccgcagtaatacggagcataaatgaccaagttctct 169

Qy      62 TCGTTGACAAAAGA---CAGCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCA 118
           |||||||||||||    | |||||||||||||| ||| ||||||| || | ||  ||||
Db     170 tcgttgacaaaagaaacccgcctgtgttcgaggacatgcctgatatcgaccgaacagcca 229

Qy     119 GTGAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGG 178
             ||| |||||||||||||||||||||| |||||||||| ||||||||||||||||||
Db     230 acgaatcccagaccagactgataatatatatgtacaaagatagtgaagtaagaggactgg 289

Qy     179 CTGTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCA 238
           |||||||||| |||||||||||  | |  |:|||||||||||||||||| ||||| ||||
Db     290 ctgtgaccctatctgtgaaggatggaaggatgtctaccctctcctgtaaaaacaaaatca 349

Qy     239 TTTCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATAT 298
           ||||||||||||||| |||||||||||||||||||||||||| ||||||||||||||||
Db     350 tttcctttgaggaaatgaatccacctgaaaatattgatgatataaaaagtgatctcatat 409

Qy     299 TCTTTCAGAAACGTGTTCCAGGACACAACAAGATGGAGTTTGAATCTTCACTGTATGAAG 358
           |||||||||||||||| |||||||||||||| ||||| |||||||||| ||||||||||
Db     410 tctttcagaaacgtgtgccaggacacaacaaaatggaatttgaatcttccctgtatgaag 469

Qy     359 GACACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAAAGG 418
           |||||||||| |||||||||||||||||||||||||||||||||| || ||||||  ||||
Db     470 gacactttctagcttgccaaaaggaagatgatgctttcaaactcgttttgaaaaggaagg 529

Qy     419 ATGAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAAAGT 471
           |||||||||||||||||||||||||||||||||| ||||||||||||||||||
Db     530 atgaaaatggggataaatctgtaatgttcactcttactaacttacatcaaagt 582


RESULT  11
V20876
ID   V20876 standard; cDNA; 665 BP.
XX
AC   V20876;
XX
DT   28-JUL-1998  (first entry)
XX
DE   Nucleotide sequence encoding a rat interleukin-18-alpha.
XX
KW   Rat interferon-gamma inducing factor; IGIF; interleukin-18; IL-18;
KW   IL-18-alpha; transformation; antibody; probe; hybridisation; ss.
XX
OS   Rattus sp.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..528
FT                   /*tag=  a
FT                   /product= "interleukin-18-alpha"
XX
PN   WO9810072-A1.
XX
PD   12-MAR-1998.
XX
PF   08-SEP-1997;   97WO-US15891.
XX
PR   08-APR-1997;   97US-0043087.
PR   09-SEP-1996;   96US-0025141.
XX
PA   (CORR ) CORNELL RES FOUND INC.
XX
PI   Conti B,  Joh TH;
XX
DR   WPI; 1998-193622/17.
DR   P-PSDB; W53283.
XX
PT   Rat interferon-gamma inducing factors and related DNA - useful for
PT   quantitating stress in a mammal
XX
PS   Claim 7; Pages 32-333; 47pp; English.
XX
CC   This is the nucleotide sequence of the rat interferon-gamma inducing
CC   factor (IGIF) isoform, also known as interleukin-18-alpha
CC   (IL-18-alpha).  It can be used to transform a cell, which upon its
CC   expression can cause the cell to produce rat IGIF, i.e. IL-18 or
CC   IL-18 alpha.  It is made by the deletion of 57 bases (360-417) from
CC   V20875, a probable exon.  The antibody to IGIF, IGIF and probes
CC   derived from it, are useful for detection of IL-18 or IL-18 alpha
CC   present in a sample. The amount of IL-18 or IL-18 alpha in a sample
CC   can be used to quantitate stress in a mammal.
XX
SQ   Sequence 665 BP; 229 A; 130 C; 132 G; 174 T; 0 other;


  Query Match             59.4%;  Score 279.8;  DB 19;  Length 665;
  Best Local Similarity   80.1%;  Pred. No. 5.5e-70;
  Matches  379;  Conservative    1;  Mismatches   33;  Indels   60;  Gaps    2;

Qy       2 ACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTCT 61
           |||||||| |||||||||||||||||||||||||||  ||||||||||||||||||||
Db     110 actttggcagacttcactgtacaaccgcagtaatacggagcataaatgaccaagttctct 169

Qy      62 TCGTTGACAAAAGA---CAGCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCA 118
```

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Db    170 tcgttgacaaaagaaacccgcctgtgttcgaggacatgcctgatatcgaccgaacagcca 229

Qy    119 GTGAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGG 178

Db    230 acgaatcccagaccagactgataatatatatgtacaaagatagtgaagtaagaggactgg 289

Qy    179 CTGTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCA 238

Db    290 ctgtgaccctatctgtgaaggatggaaggatgtctaccctctcctgtaaaaacaaaatca 349

Qy    239 TTTCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATAT 298

Db    350 tttcctttg---------------------------------------------------- 358

Qy    299 TCTTTCAGAAACGTGTTCCAGGACACAACAAGATGGAGTTTGAATCTTCACTGTATGAAG 358

Db    359 ------agaaacgtgtgccaggacacaacaaaatggaatttgaatcttccctgtatgaag 412

Qy    359 GACACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAAAGG 418

Db    413 gacactttctagcttgccaaaaggaagatgatgctttcaaactcgttttgaaaaggaagg 472

Qy    419 ATGAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAAAGT 471

Db    473 atgaaaatggggataaatctgtaatgttcactcttactaacttacatcaaagt 525


RESULT  12
Z55624
ID   Z55624 standard; cDNA; 582 BP.
XX
AC   Z55624;
XX
DT   27-MAR-2000  (first entry)
XX
DE   Equine interleukin-18 (IL-18) cDNA.
XX
KW   Interleukin-18; IL-18; adjuvant; vaccine; immune reaction; equine; ss.
XX
OS   Equus caballus.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..582
FT                   /*tag=  a
FT                   /product= "Equine IL-18"
XX
PN   WO9956775-A1.
XX
PD   11-NOV-1999.
XX
PF   04-MAY-1999;   99WO-EP03098.
XX
PR   07-MAY-1998;   98EP-0201451.
XX
PA   (ALKU ) AKZO NOBEL NV.
XX
PI   Nicolson L,  Rijke EO;
XX
DR   WPI; 2000-072212/06.
DR   P-PSDB; Y58241.
XX
PT   Novel vaccine adjuvant used to increase the immune response  -
XX
PS   Claim 11; Page 22; 28pp; English.
XX
CC   This sequence represents cDNA encoding equine interleukin-18 (IL-18).
CC   The cDNA was produced from alveolar macrophage mRNA via reverse
CC   transcription using primer Z55625, and the cDNA amplified via PCR using
CC   primers Z55626-Z55629. The invention relates to the use of recombinant
CC   IL-18 as a vaccine adjuvant. Adjuvants are used in vaccines to
CC   potentiate the immune response to an antigen derived from the pathogen.
CC   It is important that the correct type of immune reaction is triggered,
CC   since many types of immune mechanisms that can be activated are
CC   inadequate for the control of a particular pathogen. Mice were injected
CC   intramuscularly with a vaccine formulation either containing inactivated
CC   Pseudorabies virus (PRV) plus tetanus toxoid (TT), or a formulation
CC   containing inactivated PRV, TT and 0.1 micrograms of recombinant murine
CC   IL-18. When subsequently challenged with virulent PRV, unvaccinated
CC   control mice all succumbed to the infection, and only 30% of mice
CC   vaccinated with vaccine antigen alone (inactivated PRV plus TT) survived
CC   the infection. In contrast, mice which received the same amount of
CC   vaccine antigen in conjunction with IL-18 had an 80% survival rate
CC   after infection. IL-18 may be used as an adjuvant in vaccines for the
CC   immunisation of humans and other animals, such as pigs, sheep, birds,
CC   cattle, dogs, horses and fish. An adjuvant composition comprising
CC   IL-18 may be administered concomitantly or sequentially with a vaccine
CC   formulation. Additionally, IL-18 nucleotides operably linked to
CC   transcriptional regulatory sequences may be used in DNA vaccines for the
CC   in vivo expression of IL-18 in the cells of a vaccinated animal.
XX
SQ   Sequence 582 BP; 200 A; 102 C; 113 G; 167 T; 0 other;


  Query Match             57.0%;  Score 268.4;  DB 21;  Length 582;
  Best Local Similarity   76.5%;  Pred. No. 8.8e-67;
  Matches  355;  Conservative    1;  Mismatches  102;  Indels    6;  Gaps    2;

Qy      2 ACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTCT 61

Db    110 actttggcaggcttgaacctaaactctcaatcatacgaaatttgaacgaccaagttctct 169

Qy     62 TCGTTGACAAAAGA---CAGCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCA 118

Db    170 tcattaaccagggaaatcaacctgtgtttgaggatatgcctgattctgattgtacagaca 229

Qy    119 GTGAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGG 178

Db    230 acgcaccccagaccgtatttatcatatatatgtataaagatagcctcactagaggtctag 289

Qy    179 CTGTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCA 238

Db    290 cggtaaccatctctgtgaagtgtgagaaaacgtctactctctcctgtaagaacaaaatta 349

Qy    239 TTTCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATAT 298

Db    350 tttcctttaaggaaatgagtcctcctgagaatatcaatgatgaaggaaatgacatcatat 409

Qy    299 TCTTTCAGAAACGTGTTCCAGGAC---ACAACAAGATGGAGTTTGAATCTTCACTGTATG 355

Db    410 tctttcagagaagtgttccaggacatgatgataagatacagtttgagtcttcactgtata 469

Qy    356 AAGGACACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAA 415

Db    470 aaggatactttctagcttgtgaaaaagagaatgatcttttcaaactcattttgaaagaaa 529

Qy    416 AGGATGAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAAC 459

Db    530 aggatgaaaatggggataaatctgtaatgttcactgttcaaaac 573


RESULT  13
A10526
ID   A10526 standard; cDNA; 477 BP.
XX
AC   A10526;
XX
DT   23-JUN-2000  (first entry)
XX
DE   Human interleukin-18 (IL-18) nucleotide sequence.
XX
KW   Interleukin-18; production; IL-18; human; ss; medical injection product.
XX
OS   Homo sapiens.
XX
PN   CN1243130-A.
```

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XX
PD   02-FEB-2000.
XX
PF   24-JUL-1998;   98CN-0103307.
XX
PR   24-JUL-1998;   98CN-0103307.
XX
PA   (WUGG/) WU G.
XX
PI   Wu G,  Liu Z;
XX
DR   WPI; 2000-340020/30.
DR   P-PSDB; Y85167.
XX
PT   Preparation method for engineering bacteria for recombination of human
PT   interleukin-18 and its product thereof -
XX
PS   Claim 1; Page 2; 17pp; English.
XX
CC   This sequence represents the human interleukin-18 (IL-18) nucleotide
CC   sequence. The invention relates to a method for engineering bacterium for
CC   recombination of human IL-18 and a method for the preparation of IL-18. A
CC   primer containing a restriction endonuclease site can be used to
CC   accurately obtain the IL-18 gene containing 474 nucleotides, and uses the
CC   stop codon preferred by coli bacillus to raise the expression rate. The
CC   method uses a  high-amplification culture medium to increase the
CC   expression level and only requires a one-step purification process to
CC   obtain a medical injection-pure product.
XX
SQ   Sequence 477 BP; 169 A; 77 C; 89 G; 141 T; 1 other;


  Query Match             52.9%;  Score 249.2;  DB 21;  Length 477;
  Best Local Similarity   73.2%;  Pred. No. 2.2e-61;
  Matches  346;  Conservative    1;  Mismatches  120;  Indexes    6;  Gaps    2;

Qy       2 ACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTCT 61
Db       5 actttggcaagcttgaatctaaatnatcagtcataagaaatttgaatgaccaagttctct 64

Qy      62 TCGTTGACAAAAGACA---GCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCA 118
Db      65 tcattgaccaaggaaatcggcctctatttgaagatatgactgattctgactgtagagata 124

Qy     119 GTGAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGG 178
Db     125 atgcaccccggaccatatttattataagtatgtataaagatagccagcctagaggtatgg 184

Qy     179 CTGTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCA 238
Db     185 ctgtaactatctctgtgaagtgtgagaaaatttcaactctctcctgtgagaacaaaatta 244

Qy     239 TTTCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATAT 298
Db     245 tttcctttaaggaaatgaatcctcctgataacatcaaggatacaaaaagtgacatcatat 304

Qy     299 TCTTTCAGAAACGTGTTCCAGGAC---ACAACAAGATGGAGTTTGAATCTTCACTGTATG 355
Db     305 tctttcagagaagtgtcccaggacatgataataagatgcaatttgaatcttcatcatacg 364

Qy     356 AAGGACACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAA 415
Db     365 aaggatactttctagcttgtgaaaaagagagagacctttttaaactcattttgaaaaaag 424

Qy     416 AGGATGAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAA 468
Db     425 aggatgaattgggggatagatctataatgttcactgttcaaaacgaagactaa 477


RESULT  14
V48226
ID   V48226 standard; cDNA; 471 BP.
XX
AC   V48226;
XX
DT   16-NOV-1998  (first entry)
XX
DE   Human interleukin 18 gene.
XX
KW   Human; interleukin-18; IL-18; osteoclast; hypercalcaemia; osteopenia; ds;
KW   osteoclastoma Behcet's syndrome; osteosarcoma; arthropathy; osteoporosis;
KW   chronic rheumatoid arthritis; deformity ostitis; primary hyperthyroidism.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..471
FT                   /*tag= a
FT                   /product= "Interleukin 18"
FT                   /note= "No stop or start codon given"
XX
PN   EP861663-A2.
XX
PD   02-SEP-1998.
XX
PF   24-FEB-1998;   98EP-0301352.
XX
PR   25-FEB-1997;   97JP-0055468.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Gillespie MT,  Horwood NJ,  Kurimoto M,  Udagawa N;
XX
DR   WPI; 1998-448964/39.
DR   P-PSDB; W77077.
XX
PT   Use of interleukin-18 to inhibit osteoclast formation - in treatment
PT   of e.g. hypercalcaemia, osteoclastoma, Behcet's syndrome,
PT   osteosarcoma, chronic rheumatoid arthritis, deformity ostitis,
PT   primary hyperthyroidism and osteoporosis
XX
PS   Disclosure; Page 19-20; 56pp; English.
XX
CC   Interleukin-18 (IL-18) or a functional equivalent can be used for
CC   inhibition of osteoclast formation.  IL-18 is used for treating or
CC   preventing osteoclast-related diseases e.g. hypercalcaemia, osteoclastoma
CC   Behcet's syndrome, osteosarcoma, arthropathy, chronic rheumatoid
CC   arthritis, deformity ostitis, primary hyperthyroidism, osteopenia and
CC   osteoporosis.
XX
SQ   Sequence 471 BP; 166 A; 77 C; 88 G; 140 T; 0 other;


  Query Match             52.6%;  Score 247.8;  DB 19;  Length 471;
  Best Local Similarity   73.3%;  Pred. No. 5.4e-61;
  Matches  344;  Conservative    1;  Mismatches  118;  Indexes    6;  Gaps    2;

Qy       2 ACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTCT 61
Db       2 actttggcaagcttgaatctaaattatcagtcataagaaatttgaatgaccaagttctct 61

Qy      62 TCGTTGACAAAAGACA---GCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCA 118
Db      62 tcattgaccaaggaaatcggcctctatttgaagatatgactgattctgactgtagagata 121

Qy     119 GTGAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGG 178
Db     122 atgcaccccggaccatatttattataagtatgtataaagatagccagcctagaggtatgg 181

Qy     179 CTGTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCA 238
Db     182 ctgtaactatctctgtgaagtgtgagaaaatttcaactctctcctgtgagaacaaaatta 241

Qy     239 TTTCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATAT 298
Db     242 tttcctttaaggaaatgaatcctcctgataacatcaaggatacaaaaagtgacatcatat 301
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Qy    299 TCTTTCAGAAACGTGTTCCAGGAC---ACAACAAGATGGAGTTTGAATCTTCACTGTATG 355
          ||||||||| | |||| |||||||   | || |||||| | ||||||||||||   || |
Db    302 tctttcagagaagtgtcccaggacatgataataagatgcaatttgaatcttcatcatacg 361

Qy    356 AAGGACACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAA 415
          ||||| ||||||| ||||| |||| ||    ||   ||| |||||||||| ||||||||
Db    362 aaggatactttctagcttgtgaaaaagagagagacctttttaaactcattttgaaaaaag 421

Qy    416 AGGATGAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACA 464
          ||||||||   ||||||| |||| |||||||||| |    |||  | |
Db    422 aggatgaattgggggatagatctataatgttcactgttcaaaacgaaga 470
```

RESULT 15
V32625
ID V32625 standard; cDNA; 471 BP.
XX
AC V32625;
XX
DT 25-SEP-1998 (first entry)
XX
DE Mutant human interferon-gamma inducing factor cDNA IGIF/MUT12.
XX
KW Interferon-gamma inducing factor; interferon-gamma; killer cell;
KW antitumour agent; antiviral agent; antimicrobial agent; tumour; IGIF;
KW hepatitis; malaria; tuberculosis; renal carcinoma; rheumatism; AIDS;
KW osteoporosis; thrombopenia; acquired immunodeficiency syndrome; ds.
XX
OS Homo sapiens.
OS Synthetic.
XX

FH	Key	Location/Qualifiers
FT	CDS	1..471
FT		/*tag= a
FT		/product= "Mutant human interferon-gamma inducing factor IGIF/MUT12"
FT		/note= "CDS does not contain a stop codon"
FT	mutation	202..204
FT		/*tag= b
FT		/note= "changed from TGT in wild-type to TCT in mutant"

XX
PN EP845530-A2.
XX
PD 03-JUN-1998.
XX
PF 28-NOV-1997; 97EP-0309632.
XX
PR 14-NOV-1997; 97JP-0329715.
PR 29-NOV-1996; 96JP-0333037.
PR 21-JAN-1997; 97JP-0020906.
XX
PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI Kurimoto M, Okamoto I, Yamamoto K;
XX
DR WPI; 1998-288747/26.
DR P-PSDB; W48961.
XX
PT Mutants of interferon-gamma inducing polypeptide - useful as
PT antitumour, antiviral, antimicrobial or anti-immunopathic agents
XX
PS Claim 10; page 45; 59pp; English.
XX
CC The present sequence represents the mutant human interferon-gamma
CC inducing factor cDNA IGIF/MUT12. The wild-type human interferon-gamma
CC factor cDNA sequence is shown in V32754. The invention provides for
CC mutant human and mouse interferon-gamma inducing factors in which one
CC or more cysteine residues are replaced with different residues at or away
CC from the consensus sequences shown in W48956-W48958. The mutant IGIFs
CC are capable of stimulating immunocompetent cells for the production of
CC interferon-gamma and are claimed to be less toxic, more active and
CC stable than the corresponding wild type interferon-gamma inducing
CC factor. The mutant IGIFs are also claimed to enhance killer cell
CC cytotoxicity and/or induce killer cell formation, and may therefore
CC be useful as antitumour agents, antitumour immunotherapeutics, antiviral
CC agents and antimicrobial agents. The mutant IGIFs are also claimed
CC to be useful for treating hepatitis, acquired immunodeficiency syndrome
CC (AIDS), malaria, tuberculosis, solid malignant tumours (e.g. renal
CC carcinoma), rheumatism, osteoporosis and thrombopenia caused by
CC radiation- and chemo-therapy.
XX
SQ Sequence 471 BP; 166 A; 78 C; 87 G; 140 T; 0 other;

Query Match 52.6%; Score 247.8; DB 19; Length 471;
Best Local Similarity 73.3%; Pred. No. 5.4e-61;
Matches 344; Conservative 1; Mismatches 118; Indels 6; Gaps 2;

```
Qy      2 ACTTTGGCCGACTTCACTGTACAACCGCAGTAATACGGAATATAAATGACCAAGTTCTCT 61
          ||||||||   ||| | | || |    |||| ||| | ||| | ||||||||||||||||
Db      2 actttggcaagcttgaatctaaattatcagtcataagaaatttgaatgaccaagttctct 61

Qy     62 TCGTTGACAAAAGACA---GCCTGTGTTCGAGGATATGACTGATATTGATCAAAGTGCCA 118
          || ||||| || || |   |||| | || || ||||||||||||  |||    || |  |
Db     62 tcattgaccaaggaaatcggcctctatttgaagatatgactgattctgactgtagagata 121

Qy    119 GTGAACCCCAGACCAGACTGATAATATACATGTACAAAGACAGTGAAGTAAGAGGACTGG 178
           || ||||| ||||| | | || |||   ||||| ||||| ||  |    |||||  |||
Db    122 atgcaccccggaccatatttattataagtatgtataaagatagccagcctagaggtatgg 181

Qy    179 CTGTGACCCTCTCTGTGAAGGATAGTAAAAYGTCTACCCTCTCCTGTAAGAACAAGATCA 238
          |||| ||  ||||||||||  |   ||||: || || |||||||| |||||| || |
Db    182 ctgtaactatctctgtgaagtctgagaaaatttcaactctctcctgtgagaacaaaatta 241

Qy    239 TTTCCTTTGAGGAAATGGATCCACCTGAAAATATTGATGATATACAAAGTGATCTCATAT 298
          |||||||| |||||||| |||| ||||| || ||  | |||| | |||||||  ||||||
Db    242 tttcctttaaggaaatgaatcctcctgataacatcaaggatacaaaaagtgacatcatat 301

Qy    299 TCTTTCAGAAACGTGTTCCAGGAC---ACAACAAGATGGAGTTTGAATCTTCACTGTATG 355
          ||||||||| | |||| |||||||   | || |||||| | ||||||||||||   || |
Db    302 tctttcagagaagtgtcccaggacatgataataagatgcaatttgaatcttcatcatacg 361

Qy    356 AAGGACACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAAACTCATTCTGAAAAAAA 415
          ||||| ||||||| ||||| |||| ||    ||   ||| |||||||||| ||||||||
Db    362 aaggatactttctagcttgtgaaaaagagagagacctttttaaactcattttgaaaaaag 421

Qy    416 AGGATGAAAATGGGGATAAATCTGTAATGTTCACTCTCACTAACTTACA 464
          ||||||||   ||||||| |||| |||||||||| |    |||  | |
Db    422 aggatgaattgggggatagatctataatgttcactgttcaaaacgaaga 470
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